

HAER  
IOWA,  
97-51001,  
1-

HISTORIC AMERICAN ENGINEERING RECORD

IA-1

Pacific Short Line Bridge

Master Photo List

Spanning the Missouri River between Sioux City, Iowa and South Sioux City, Nebraska, carrying U.S. Highway 20, Sioux City, Woodbury County, Iowa.

Photographs by Robert Ryan and Hans Muessig, May 1980.

HAER	IA-1-1	General View of the Bridge from the South Shore, looking WNW.
	IA-1-2	General View of the Bridge from Prospect Hill, looking SE.
	IA-1-3	General View of the Bridge from the North Shore, looking W (elevation of the entire bridge).
	IA-1-4	South approach to the Bridge; Dakota Avenue, South Sioux City, Nebraska.
	IA-1-5	South Approach Span, Original Pier 8, & South Swing Span; looking ENE.
	IA-1-6	Barrel Shot of South Swing Span, looking N.
	IA-1-7	Barrel Shot of North Fixed Span, looking S.
	IA-1-8	3/4 View of Bridge from South Shore, looking NNE.
	IA-1-9	3/4 View of Bridge from North Shore, looking SW.
	IA-1-10	Elevation view of South Fixed Span, looking W.
	IA-1-11	Elevation of South Swing Span, looking WNW.

- IA-1-12 3/4 View of South Fixed Span, looking SSE.
- IA-1-13 3/4 View of South Fixed Span, looking SE.
- IA-1-14 3/4 View of South Swing Span, looking NE.
- IA-1-15 Builder's Plate: originally inside left End Post of Swing Span (both N & S).
- IA-1-16 Builder's Plate: originally inside the right End Post of Swing Span (both N & S).
- IA-1-17 Central Tower, South Swing Span; looking NNW.
- IA-1-18 Deck of South Swing Span, showing S half of the span.
- IA-1-19 Pier 6 (at N end of South Swing Span) & general view of Bottom Chords and Bracing; looking NNE.
- IA-1-20 Floor Beam, Bottom Chord Member R1, and Hip Vertical Joining at R1; South Swing Span; looking S.
- IA-1-21 Bottom Lateral Bracing, Bottom Chord Member R7, Inclined End Post of N  $\frac{1}{2}$  of the span, Vertical Post of the Central Tower, & Floor Beam resting on the Drum, South Swing Span; looking W.
- IA-1-22 Top Lateral Bracing & Top Chord, Vertical Tension Member 6, and Vertical Compression Members 5 & 4; South Swing Span; looking N.
- IA-1-23 Left Inclined End Post, Portal Bracing & Strut, and Left Panels 1 - 4; South Swing Span; looking NNE.
- IA-1-24 Pinned Connection -- Left End Post & Top Chord Member 1L; South Swing Span; looking NE.
- IA-1-25 Vertical Tension Member L5 & its Lower Connection with the Floor Beam at L5 (L4 is on left side of photograph); South Swing Span; looking SW.

- IA-1-26 Vertical Tension Member L4 & its Lower Connection with Floor Beam L4; South Swing Span; looking NW.
- IA-1-27 Pinned Connection at Top Chord; Vertical Tension Member is at R5; South Swing Span; looking SE.
- IA-1-28 Intermediate Pinned Connection between Top & Bottom Chord at R4; South Swing Span; looking NE.
- IA-1-29 Pier 7 & Drum; South Swing Span; looking SSE.
- IA-1-30 Pier 7 & Drum; Bottom Chord of Swing Span; looking E.
- IA-1-31 Inside the Drum; South Swing Span.
- IA-1-32 Detail of Drum Turning Mechanism; South Swing Span; looking W.
- IA-1-33 Detail of Rollers, Drum & Rack; South Swing Span; looking WSW.
- IA-1-34 Detail of Locking Stud & one of the two Lifting Rollers at the North Abutment; South Swing Span; looking E.
- IA-1-35 Pier 6; South end of South Fixed Span & North end of South Swing Span; looking NE.
- IA-1-36 Piers 6 & 7; South end of South Fixed Span & South Swing Span; looking SSW.
- IA-1-37 Abutment, Pier 5 (pier common to N & S Fixed Spans).
- IA-1-38 Abutment, Pier 5; showing junction of the two Fixed Spans & the End Posts of each --- looking E.
- IA-1-39 Pier 5 & the first (1R) segment of the North Fixed Span's Bottom Chord; looking SW.
- IA-1-40 Two segments of the Bottom Chord of the South Fixed Span; Panel Points shown are R5, R6, & R7; looking E.

- IA-1-41 Fixed Span, Floor Beam 1, showing the cantilever; looking N. (The splice between the original beam and the 1960 extension (widening) is between the two stringers to the left of the bottom chord tension members).
- IA-1-42 Fixed Span; General View of the Floor Beam, Stringer, & Lateral Bracing System; looking S. (from near to far: 6L & R, 5L & R, 4 L & R).
- IA-1-43 Fixed Span, Detail of Floor Beam, Lower Chord Connection, Vertical Tension Member connection at 5L; looking NNW.
- IA-1-44 Fixed Span, Floor Beam, Lower Chord Connection, Vertical Tension Member Connection at 2R; looking WW.
- IA-1-45 Fixed Span, Detail of Vertical Tension Member Connection, from above; looking S.
- IA-1-46 Fixed Span, Detail of Vertical & Diagonal Compression Members at 4R, from above; looking N.
- IA-1-47 Fixed Span, underside of Inclined End Posts, North Fixed Span; looking NE.
- IA-1-48 Fixed Span, Detail of Pinned Connection between End Post & First Segment of Top Chord (Vertical Tension Member goes to 2L); looking E.
- IA-1-49 Fixed Span, Intermediate Connection 5; looking ENE.
- IA-1-50 Fixed Span, Detail of Intermediate Pinned Connection at 5R, looking NE.
- IA-1-51 Fixed Span, Intermediate Connection 7; looking NE.
- IA-1-52 Fixed Span, Top Chord at Panel Point 6; diagonal member goes to intermediate connection 7 & then to bottom chord at 8; looking ESE.

- IA-1-53 Portal View of North Fixed Span.
- IA-1-54 Deck & Lower Portion of Webbing, North Fixed Span (camera is approximately at 3); looking N.
- IA-1-55 View of Upper Portion of Webbing, North Fixed Span (camera is approximately at 5); looking N.

The following photographs were copied from historic prints or glass plate negatives from the Rumsey Room, Sioux City Museum.

- IA-1-56 Panoramic View of Sioux City and Missouri River, showing early construction on the bridge, taken from Prospect Hill; (Waltermire, 1890); 1 of 2 (left ½ of oversize print).
- IA-1-57 Panoramic View of Sioux City & Missouri River, showing early construction on the bridge, taken from Prospect Hill; (Waltermire, 1890); 2 of 2 (right ½ of oversize print).
- IA-1-58 Detail from the Waltermire Panorama, showing a train crossing the pontoon bridge to Covington, Nebraska (now South Sioux City); (Waltermire, 1890).
- IA-1-59 Erecting Crane on the Iowa Draw Span probably September 13, 1895.
- IA-1-60 Storage Area for Structural Members, Iowa Side (downstream from bridge), work on Iowa Draw Span, about Sept. 20, 1895.
- IA-1-61 Completing the Iowa Draw Span, late September, 1895; seen from Prospect Hill.
- IA-1-62 Construction of the Combination Bridge with the North Fixed Span nearly completed, taken from downstream of the bridge; c. October 18, 1895. (Image reversed in Print).

IA-1-63

Construction of the Combination Bridge with the North Fixed Span nearly completed, taken from Prospect Hill, c. October 18, 1895. (Image reversed in print).

IA-1-64

Construction of the Combination Bridge with the second fixed span (south) nearly completed, taken from downstream of the bridge, c. October 28, 1895. (Image reversed in print).

IA-1-65

Construction of the Combination Bridge with the second fixed span (south) nearly completed, taken from Prospect Hill, c. October 28, 1895. (Image reversed in print).

IA-1-66

Completed Combination Bridge, showing Covington, Nebraska & the dismantling of the pontoon bridge. (Probably early May, 1896).

IA-1-67

Copy negative of a newspaper photograph, "Iowa End of the Combination Bridge," dated 1906.

HAER  
IOWA,  
97-51001,

1 -

# HISTORIC AMERICAN ENGINEERING RECORD

## INDEX TO PHOTOGRAPHS

Addendum to  
Pacific Short Line Bridge (Combination Bridge)  
Spanning Missouri River  
Sioux City  
Woodbury County  
Iowa

HAER No. IA-1

30 photocopies of cyanotypes drawn from the Archives of the  
Sioux City Journal

- IA-1-68      PORTRAITS OF J.A.L. WADDELL, DESIGNER & CHIEF ENGINEER, AND  
LEE TREADWELL, RESIDENT ENGINEER.
- IA-1-69      CEMENT TESTING ROOM.
- IA-1-70      CAISSON FOR PIER #7 SHORTLY AFTER LAUNCHING, JULY 23, 1895.
- IA-1-71      THE POWER HOUSE FOR EITHER PIER #4 OR PIER #5, SUMMER OF 1895.
- IA-1-72      A CASE OF THE BENDS, OR CAISSON DISEASE, SUMMER OF 1895.
- IA-1-73      RECOVERY AFTER A CASE OF THE BENDS, SUMMER OF 1895.
- IA-1-74      CENTER GIRDER SECTION FOR THE BOTTOM CHORD OF THE IOWA SWING SPAN  
LOADED ON A DOLLY READY TO BE ROLLED OUT TO THE BRIDGE TO BE PLACED  
ON THE DRUM. PROBABLY TAKEN SEPTEMBER 7, 1895.
- IA-1-75      ERECTING CRANE ON THE NORTH ARM OF THE IOWA SWING SPAN, SEPTEMBER 14,  
1895.
- IA-1-76      WORK ON THE SOUTH ARM OF THE IOWA SWING SPAN.
- IA-1-77      ERECTING CRANE COMPLETING THE SOUTH ARM OF THE IOWA SWING SPAN,  
SEPTEMBER 25, 1895.
- IA-1-78      WORK ON THE FIRST (NORTH) FIXED SPAN, OCTOBER 5, 1895.
- IA-1-79      WORK ON THE FIRST (NORTH) FIXED SPAN, OCTOBER 7, 1895.
- IA-1-80      WORK ON THE FIRST (NORTH) FIXED SPAN, OCTOBER 8, 1895.
- IA-1-81      WORK ON THE FIRST (NORTH) FIXED SPAN, OCTOBER 9, 1895.
- IA-1-82      WORK ON THE FIRST (NORTH) FIXED SPAN, OCTOBER 10, 1895.
- IA-1-83      WORK ON THE FIRST (NORTH) FIXED SPAN, OCTOBER 13, 1895.

- IA-1-84 CLAMSHELL BUCKET ("DREDGE") USED TO EXCAVATE SAND FROM PIER #7 CAISSON.
- IA-1-85 PIERS #7, #6, and #5 UNDER CONSTRUCTION, WITH THE ERECTING CRANE BEGINNING WORK ON THE NORTH FIXED SPAN. PROBABLY TAKEN EARLY OCTOBER, 1895.
- IA-1-86 WORK ON THE SECOND (SOUTH) FIXED SPAN SHOWING THE LOWER CHORD AND HANGERS LAID OUT ON THE FALSEWORK.
- IA-1-87 CANTILEVER ROADWAY BRACKETS ON THE EAST SIDE OF THE NEBRASKA SWING SPAN, WITH LEE TREADWELL STANDING ON THE CENTER GIRDER OF THE LOWER CHORD.
- IA-1-88 LOWER CHORD CONNECTION ON ONE OF THE SWING SPANS.
- IA-1-89 SOOYSMITH CREWS GRADING THE IOWA APPROACH, NOVEMBER 20, 1895.
- IA-1-90 TOP CHORD OF IOWA SWING SPAN SHORTLY AFTER COMPLETION OF THE BRIDGE.
- IA-1-91 WEBBING, TOP CHORD AND DECK OF THE SOUTH FIXED SPAN SHORTLY AFTER COMPLETION OF THE BRIDGE.
- IA-1-92 SOOYSMITH CREWS DRIVING PILES FOR THE NEBRASKA APPROACH.
- IA-1-93 IOWA APPROACH TO THE COMBINATION BRIDGE SHOWING THE TOLL HOUSE AND TWO STREETCARS.
- IA-1-94 IOWA APPROACH TO THE COMBINATION BRIDGE FROM THE PORTAL OF THE IOWA SWING SPAN.
- IA-1-95 ERECTING CRANE ON SOUTH ARM OF THE NEBRASKA SWING SPAN, NOVEMBER 14, 1895.
- IA-1-96 THE COMPLETED BRIDGE FROM UPSTREAM ON THE IOWA SHORE.
- IA-1-97 George Newman Photographer.  
VIEW OF SOUTH END OF THE NEBRASKA SWING SPAN SHOWING THE BRIDGE OPEN APRIL 13, 1945.
- IA-1-98 George Newman Photographer.  
VIEW OF THE NEBRASKA SWING SPAN OPEN FOR RIVER PASSAGE.  
APRIL 13, 1945.
- 2 photocopies of photographs.  
Drawn from the Rumsey Room, Sioux City Museum.
- IA-I-99 DETAIL FROM THE WALTERMIRE PANORAMA, SHOWING EARLY CONSTRUCTION ON PIER #3. WALTERMIRE (Sept. or Oct., 1890).
- IA-1-100 AN EARLY TWENTIETH CENTURY VIEW OF THE BRIDGE (PAINTED SILVER) FROM PROSPECT HILL.